

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent

In re patent application of: HAGGETT et al.

Serial No.: New U.S. Application

Examiner:

Filed: May 4, 2001

Art Unit:

For: FLOWTHROUGH DEVICE FOR THE
ULTRASONIC DESTRUCTION OF
MICROORGANISMS IN FLUIDS

Docket No.:

P07193US00/RFH

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C.

S I R:

Prior to examination, please amend the above-identified application as follows.

IN THE CLAIMS:

A clean version of the amended claims is provided herewith in **Attachment A**. It will be noted that claims 3, 8, 13 and 18 have been amended relative to the previously provided version as shown by the marked up version thereof in **Attachment B** provided herewith.

REMARKS

Claims 3, 8, 13 and 18 have been amended to clarify the wording thereof.

Favorable action is respectfully solicited.

Respectfully submitted,

Date: May 4, 2001

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ATTACHMENT A

Clean Replacement/New Claims

Following herewith is a clean copy of each claim which replaces each previous claim having the same number.

3. (Amended) An apparatus as defined in Claim 2, wherein a number of said ceramic rings are co-axial with the pipe, each ring being located adjacent to another ring.

8. (Amended) An apparatus as defined in Claim 6, wherein the pressurization means for the transmission fluid comprises a hydraulic cylinder connected to the outer container's interior, the cylinder being provided with means to apply a predetermined pressure to a piston in the hydraulic cylinder.

13. (Amended) An apparatus as defined in Claim 12, wherein the treatment container is a pipe through which the liquid can flow and the ultrasonic vibration generator are piezoelectric ceramic rings connected to a power supply, the pipe and rings being co-axial with the rings being located adjacent to another ring.

18. (Amended) An apparatus as defined in Claim 16, wherein a number of modules are connected in parallel with inputs to each of said pipes being connected to an input manifold and outputs of each pipe being connected to an output manifold to form a bank of modules wherein transmission fluid in the modules is pressurized by a

single hydraulic cylinder connected to all of the chambers, a piston in the hydraulic cylinder being connected to equipment that maintains a predetermined pressure on the piston.

ATTACHMENT B

Marked Up Replacement Claims

Following herewith is a marked up copy of each rewritten claim.

3. (Amended) An apparatus as defined in Claim 2, wherein a number of said ceramic rings are co-axial with the pipe, each ring being located adjacent to another ring.

8. (Amended) An apparatus as defined in Claim 6, wherein the pressurization means for the transmission fluid comprises ~~is pressurized by a~~ hydraulic cylinder connected to the outer container's interior, the cylinder being provided with means to apply a predetermined pressure to a piston in the hydraulic cylinder.

13. (Amended) An apparatus as defined in Claim 12, wherein the treatment container is a pipe through which the liquid can flow and the ultrasonic vibration generator are piezoelectric ceramic rings connected to a power supply, the pipe extending through the rings' center and rings being co-axial with the rings being located adjacent to another ring.

18. (Amended) An apparatus as defined in Claim 16, wherein a number of modules are connected in parallel with inputs to each of said pipes being connected to an input manifold and outputs of each pipe being connected to an output manifold to form a bank of modules wherein transmission fluid in the modules is pressurized by a

single hydraulic cylinder connected to all of the chambers, ~~the cylinder being provided~~
~~with means to apply a predetermined pressure to a piston in the hydraulic cylinder being~~
connected to equipment that maintains a predetermined pressure on the piston.